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As for the "mathematical probability" referred to by Dr. Dall, it is illusory. We find "interwoven chains of customs and belief" of the most seemingly fanciful and artificial character in nations so remote that the theory of transmission is impossible—such as Niblack shows between New Zealanders and Haidahs, or as Morgan adduced between Iroquoian and Dravidian tribes. These do not depend on transmission, nor yet on chance, but on the unalterable principles of human psychical development, which proceeds under fixed laws, operates largely on the same or similar materials, and produces identical or analogous results.

In conclusion, I repeat what I have said more than once before, that I challenge any one to cite a single American language showing clear traces of Asiatic or any other foreign influence; or a single native American art or industry obviously traceable to foreign culture.

D. G. BRINTON.

Philadelphia, April 5.

### Auroras.

SINCE 1572 there have been 106 auroras seen as far south as the Mediterranean in Europe or Virginia in this country, and exhibiting features constituting displays of the first magnitude. In making up this list, the records consulted have been sufficiently complete to insure that very few, if any, displays, having the geographical extent indicated, have been omitted. The list comprises, practically, all the really great auroras during the past 420 years, few, if any, of which would have failed to be visible even in full moonlight or strong twilight. It is a very curious fact, that very few of these splendid displays reported from large numbers of localities and attracting the attention of even the most indifferent, fall near the solstices, while they are most numerous near the equinoxes. This peculiarity has long been known, but that the distribution is real and not factitious, depending upon twilight in the summer and cloudiness in the winter, is best shown by admitting only those auroras which are certainly

on a sufficiently grand scale to insure that they will without fail be seen and widely reported. The monthly distribution of the displays belonging assuredly to this class during the past 420 years, is as follows:

January.....	6
February.....	17
March.....	14
April.....	8
May.....	3
June.....	0
July.....	4
August.....	4
September.....	14
October.....	21
November.....	12
December.....	3

Total..... 106

M. A. VEEDER.

Lyons. N. Y.

### The Palæolithic Man Once More.

IN the first number of the new *Journal of Geology*, published under the auspices of the University of Chicago, Mr. W. H. Holmes, in the capacity of co-editor in "Archeologic Geology," has given to the world a long and labored article, in which he endeavors to demonstrate that because he has failed to find any evidence of the existence of the palæolithic man in the Trenton gravels, therefore no such evidence has ever been found by any one else. In his characteristic style he designates as "gravel searchers, unacquainted with the nature of the object collected and discovered, and little skilled in the observation of the phenomena by means of which all questions of age must be determined," several of the foremost men of science of our time, who claim to have discovered such evidence there. As he also makes

### CALENDAR OF SOCIETIES.

#### Anthropological Society, Washington.

Apr. 11.—Frank Hamilton Cushing, Zuni Song and Dance.

#### Biological Society, Washington.

Apr. 8.—J. W. Chickering, The Botanical Landscape; Frederick V. Coville, Characteristics and Adaptations of a Desert Flora; C. W. Stiles, Notes on Parasites,—the Cause of "Measly Duck," with Microscopic Demonstration; R. R. Gurley, Natural Selection as Exemplified by the Cackling of Hens.

#### Geological Society, Washington.

Apr. 12.—Symposium—Subject: The Age of the Earth, taking as a basis for discussion the article by Mr. Clarence King in the *American Journal of Science* for January, 1893. The discussion was opened by Mr. Gilbert, and many others participated.

### THE RADIOMETER.

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the astonishing statement in the same article that "most of these so-called gravel implements of Europe are doubtless the rejects of manufacture," pre-historic archæologists, and especially those of Europe, will draw their own inferences as to the qualifications for pronouncing an *ex cathedra* decision of the man who made the statement (*Science*, Nov. 25, 1892) that "there is not in the museums of Europe or America a single piece of flaked stone found in place in the gravels of America and satisfactorily verified that can with absolute safety be classified as an implement at all."

I have had occasion elsewhere to refer to Mr. Holmes's fondness for making startling assertions, instancing his statement about the Indians, in the same article in *Science*, that their "quarrying was accomplished mainly by the aid of stone, wood and bone utensils, aided in some cases perhaps by fire. With these simple means the solid beds of rock were penetrated to depths often reaching twenty-five feet."

The readers of *Science* have lately had an opportunity of observing also that Mr. Holmes "strongly deprecates personalities in scientific discussion."

HENRY W. HAYNES.

Boston, March 33.

#### BOOK-REVIEWS.

*The History and Theory of Money.* By SIDNEY SHERWOOD. Philadelphia, J. B. Lippincott Co. \$2.

THIS book contains twelve lectures delivered in the university extension course at Philadelphia last year before a company of bankers and others interested in the subject of finance. Half the lectures are professedly historical and the other half theoretical; but the historical element is really predominant throughout them all. This seems to us a mistake, for the history of money cannot be properly understood nor appreciated without a previous acquaintance with the theory, and in these lectures the theory is not stated with anything like the clearness and fulness which

the subject demands. However, it was expected that the attendants on the lectures would read and study for themselves during the progress of the course, the books recommended for their use being named in this volume; and such reading would supplement the instruction given in the lectures. Mr. Sherwood, who is attached to the Wharton School of Finance in the University of Pennsylvania, shows a thorough familiarity with his subject, and, what is quite as important, he has no hobbies to ride, and is not prone to extreme or one-sided views. He begins by showing what money is for, what purposes it fulfils in the world's economy, and then proceeds to treat of the different kinds of money in use, with remarks on coinage, on the history of the precious metals, and on government notes and bank notes, with brief discussions of some of the many economic questions which those subjects involve. The lectures are expressed in a plain and straightforward style, which the hearers could readily understand, and they were evidently enjoyed by those who listened to them. For our part, however, we have found the discussions at the end of each lecture, and which are here reported in brief, the most interesting part of the book as well as the most suggestive. There were many persons in the audience well equipped with both theoretical and practical knowledge of the subject, and their discussions with Mr. Sherwood and with one another called up many points that were not touched upon in the lectures, and presented various and sometimes conflicting views. Among the debaters was a lady of socialistic proclivities, whose remarks and questions added variety and piquancy to the scene, though she did not appear to have many sympathizers. On the whole, though it cannot be regarded as an adequate scientific treatise on money, this book will certainly have an interest for all who care for its subject.

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